



## Claims

1-182 Canceled, without prejudice

183. (New) An underwater alert system comprising:

5 a first transmitter assembly, adapted to be carried by a first diver, including:

at least a first alert switch adapted to generate at least a first electrical alert actuation signal responsive to the at least the first alert switch being actuated;

a first transmitter electrically coupled to the at least the first alert switch and adapted to generate at least a first predetermined electrical transmit signal responsive to receiving the at least  
10 the first electrical alert actuation signal, respectively;

a first transmitting element electrically coupled to the first transmitter and adapted to generate at least a first predetermined wireless signal responsive to receiving the at least the first predetermined electrical transmit signal, respectively; and

a first waterproof transmitter housing adapted to carry at least one of the at least the first  
15 alert switch, the first transmitter and the first transmitting element; and

a first receiver assembly, adapted to be carried by a second diver having a first mask adapted to be worn on the second diver's head, including:

a first receiving element adapted to generate at least a first electrical receive signal responsive to receiving the at least the first predetermined wireless signal, respectively;

20 a first receiver electrically coupled to the first receiving element and adapted to generate at least a first predetermined electrical alert attention signal responsive to receiving the at least the first electrical receive signal, respectively;

at least a first alert device electrically coupled to the first receiver and adapted to generate at least a first predetermined alert responsive to receiving the at least the first predetermined  
25 electrical alert attention signal; and

a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver and the at least the first alert device;

wherein the first mask is adapted to carry at least the at least the first alert device of the first receiver assembly in a way that permits the at least the first predetermined alert to gain the  
30 attention of the second diver when the first mask is worn on the second diver's head.

184. (New) The underwater alert system according to claim 183, wherein the at least the first alert switch further comprises:

5           at least a first pushbutton switch adapted to generate the at least the first electrical alert actuation signal responsive to the at least the first pushbutton switch being manually actuated by the first diver.

185. (New) The underwater alert system according to claim 184, wherein the first transmitter  
10 assembly further comprises:

          a light source carried by the first transmitter housing and adapted to illuminate at least a portion of the pushbutton.

186. (New) The underwater alert system according to claim 183, wherein the at least the first alert  
15 device further comprises:

          a visual alert device adapted to generate a predetermined visual alert, as the at least the first predetermined alert, that the second diver can see when wearing the first mask.

187. (New) The underwater alert system according to claim 186, wherein the visual alert device  
20 further comprises:

          a first light source adapted to generate a predetermined visible light signal, as the predetermined visual alert.

188. (New) The underwater alert system according to claim 183, wherein the at least the first alert  
25 device further comprises:

          an audible alert device adapted to generate a predetermined audible alert, as the at least the first predetermined alert, that the second diver can hear when wearing the first mask.

189. (New) The underwater alert system according to claim 188, wherein the audible alert device  
30 further comprises:

an electro-acoustic transducer adapted to generate a predetermined audible acoustic signal, as the predetermined audible alert.

190. (New) The underwater alert system according to claim 183, wherein the at least the first alert  
5 device further comprises:

a tactile alert device adapted to generate a predetermined tactile alert, as the at least the first predetermined alert, that the second diver can feel when wearing the first mask.

191. (New) The underwater alert system according to claim 190, wherein the tactile alert device  
10 further comprises:

a vibrator adapted to generate a predetermined vibration signal, as the predetermined tactile alert.

192. (New) The underwater alert system according to claim 183 further comprising:  
15 a second transmitter assembly adapted to be carried by the second diver and including:

at least a second alert switch adapted to generate at least a second electrical alert actuation signal responsive to the at least the second alert switch being actuated;

a second transmitter electrically coupled to the at least the second alert switch and adapted to generate at least a second predetermined electrical transmit signal responsive to receiving  
20 the at least the second electrical alert actuation signal, respectively;

a second transmitting element electrically coupled to the second transmitter and adapted to generate at least a second predetermined wireless signal responsive to receiving the at least the second predetermined electrical transmit signal, respectively; and

a second waterproof transmitter housing adapted to carry at least one of the at least the  
25 second alert switch, the second transmitter and the second transmitting element; and

a second receiver assembly, adapted to be carried by the first diver having a second mask adapted to be worn on the first diver's head, including:

a second receiving element adapted to generate at least a second electrical receive signal responsive to receiving the at least the second predetermined wireless signal, respectively;

a second receiver electrically coupled to the second receiving element and adapted to generate at least a second predetermined electrical alert attention signal responsive to receiving the at least the second electrical receive signal, respectively;

5 at least a second alert device electrically coupled to the second receiver and adapted to generate at least a second predetermined alert responsive to receiving the at least the second predetermined electrical alert attention signal; and

a second waterproof receiver housing adapted to carry at least one of the second receiving element, the second receiver and the at least the second alert device; and

10 wherein the second mask is adapted to carry at least the at least the second alert device of the second receiver assembly in a way that permits the at least the second predetermined alert to gain the attention of the first diver when the second mask is worn on the first diver's head.

193. (New) The underwater alert system according to claim 192,

15 wherein the first waterproof transmitter housing and the second waterproof receiver housing are integrally formed together to provide a first transceiver housing adapted to be carried by the second mask, and

wherein the second waterproof transmitter housing and the first waterproof receiver housing are integrally formed together to provide a second transceiver housing adapted to be carried by the first mask.

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194. (New) The underwater alert system according to claim 193,

wherein the first transceiver housing is integrally formed with the second mask, and

wherein the second transceiver housing is integrally formed with the first mask.

25 195. (New) The underwater alert system according to claim 183 further comprising:

a first attachment mechanism adapted to permit the first waterproof receiver housing to be mechanically coupled to the first mask.

196. (New) The underwater alert system according to claim 195, wherein the first attachment  
30 mechanism further comprises:

a first bracket adapted to be carried by the first mask and having a first mounting interface adapted to mechanically engage and disengage a first mounting interface on the first waterproof receiver housing to permit the first waterproof receiver housing to be attached to and removed from, respectively, the first bracket.

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197. (New) The underwater alert system according to claim 196, wherein the first bracket further comprises:

a second mounting interface having an adhesive disposed thereon to permit the second mounting interface of the first bracket to be mechanically coupled to the first mask.

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198. (New) The underwater alert system according to claim 196, wherein the first bracket is integrally formed with the first mask.

199. (New) The underwater alert system according to claim 195, wherein the at least the first alert device generates the first predetermined alert when the first waterproof receiver housing is mechanically coupled to the first mask, and wherein the at least the first alert device generates a second predetermined alert when the first waterproof receiver housing is mechanically decoupled from the first mask.

200. (New) The underwater alert system according to claim 183, wherein the first waterproof receiver housing is integrally formed with the first mask.

201. (New) The underwater alert system according to claim 183,  
wherein the first transmitter assembly further comprises a first transmitter identity selection device adapted to provide the first transmitter with at least a first transmitter identity, and  
wherein the first receiver assembly further comprises a first receiver identity selection device adapted to provide the first receiver with the at least the first transmitter identity to permit the first receiver to communicate with the first transmitter.

202. (New) The underwater alert system according to claim 183,  
wherein the first transmitter assembly further comprises:

a first power supply adapted to provide a first supply of electrical power; and

a first power switch adapted to electrically couple the first supply of electrical power to at least one of the at least the first alert switch, the first transmitter and the first transmitting element responsive to the first power switch being actuated, and

5 wherein the first receiver assembly further comprises:

a second power supply adapted to provide a second supply of electrical power; and

a second power switch adapted to electrically couple the second supply of electrical power to at least one of the first receiving element, the first receiver and the at least the first alert device responsive to the second power switch being actuated.

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203. (New) The underwater alert system according to claim 202, wherein at least one of the first power switch and the second power switch further comprises:

a water-activated switch adapted to be actuated responsive to the water-activated switch being located underwater.

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204. (New) The underwater alert system according to claim 183 further comprising:

a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

wherein the at least the first alert switch further comprises:

20 an electronic switch electrically coupled to the dive computer and adapted to generate the at least the first electrical alert actuation signal responsive to the dive computer data being an undesirable, predetermined value.

205. (New) The underwater alert system according to claim 183 further comprising:

25 a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

wherein the first transmitter is adapted to transmit dive computer data, associated with the dive computer, to the first receiver.

30 206. (New) The underwater alert system according to claim 183, wherein the first transmitter assembly further comprises:

a transmitter alert device adapted to generate at least a second predetermined alert responsive to a function of the first transmitter assembly.

207. (New) The underwater alert system according to claim 206, wherein the function of the first transmitter assembly further comprises at least one of:

a low voltage warning, a verification of operation, a confirmation of transmitter identity selection, a confirmation of activation of the first alert switch, a confirmation of activation of the power on/off switch, and a condition of the charging circuit.

208. (New) The underwater alert system according to claim 206, wherein the transmitter alert device further comprises at least one of:

a visual alert device adapted to generate a predetermined visual alert, as the at least the second predetermined alert, that the first diver can see when wearing the first transmitter assembly;

an audible alert device adapted to generate a predetermined audible alert, as the at least the second predetermined alert, that the first diver can hear when wearing the first transmitter assembly; and

a tactile alert device adapted to generate a predetermined tactile alert, as the at least the second predetermined alert, that the first diver can feel when wearing the first transmitter assembly.

209. (New) The underwater alert system according to claim 183, wherein the at least the first alert switch is automatically actuated responsive to information related to at least one of the first diver's body, equipment and environment.

210. (New) The underwater alert system according to claim 183, wherein the at least the first alert device generates the first predetermined alert when the first waterproof receiver housing is above water, and wherein the at least the first alert device generates a second predetermined alert when the first waterproof receiver housing is underwater.

211. (New) An underwater alert system comprising:

a first transmitter assembly, adapted to be carried by a first diver, including:

at least a first alert switch adapted to generate at least a first electrical alert actuation signal responsive to the at least the first alert switch being actuated, wherein the at least the first alert switch further comprises:

at least a first pushbutton switch adapted to generate the at least the first electrical alert actuation signal responsive to the at least the first pushbutton switch being manually actuated by the first diver;

a first transmitter electrically coupled to the at least the first alert switch and adapted to generate at least a first predetermined electrical transmit signal responsive to receiving the at least the first electrical alert actuation signal, respectively;

a first transmitting element electrically coupled to the first transmitter and adapted to generate at least a first predetermined wireless signal responsive to receiving the at least the first predetermined electrical transmit signal, respectively;

a first power supply adapted to provide a first supply of electrical power;

a first power switch adapted to electrically couple the first supply of electrical power to at least one of the at least the first alert switch, the first transmitter and the first transmitting element responsive to the first power switch being actuated; and

a first waterproof transmitter housing adapted to carry at least one of the at least the first alert switch, the first transmitter, the first transmitting element, the first power supply and the first power switch; and

a first receiver assembly, adapted to be carried by a second diver having a first mask adapted to be worn on the second diver's head, including:

a first receiving element adapted to generate at least a first electrical receive signal responsive to receiving the at least the first predetermined wireless signal, respectively;

a first receiver electrically coupled to the first receiving element and adapted to generate at least a first predetermined electrical alert attention signal responsive to receiving the at least the first electrical receive signal, respectively;

at least a first alert device electrically coupled to the first receiver and adapted to generate at least a first predetermined alert responsive to receiving the at least the first predetermined electrical alert attention signal, wherein the at least the first alert device further comprises:



a first visual alert device adapted to generate a first predetermined visual alert, as the at least the first predetermined alert, that the second diver can see when wearing the first mask, wherein the first visual alert device further comprises:

5 a first light source adapted to generate a first predetermined visible light signal, as the first predetermined visual alert;

a second power supply adapted to provide a second supply of electrical power;

a second power switch adapted to electrically couple the second supply of electrical power to at least one of the first receiving element, the first receiver and the at least the first alert device responsive to the second power switch being actuated; and

10 a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver, the at least the first alert device, the second power supply and the second power switch;

wherein the first mask is adapted to carry at least the at least the first alert device of the first receiver assembly in a way that permits the at least the first predetermined alert to gain the attention of the second diver when the first mask is worn on the second diver's head; and

15 a first attachment mechanism adapted to permit the first waterproof receiver housing to be mechanically coupled to the first mask.

212. (New) The underwater alert system according to claim 211 further comprising:

20 a second transmitter assembly, adapted to be carried by the second diver, including:

at least a second alert switch adapted to generate at least a second electrical alert actuation signal responsive to the at least the second alert switch being actuated, wherein the at least the second alert switch further comprises:

25 at least a second pushbutton switch adapted to generate the at least the second electrical alert actuation signal responsive to the at least the second pushbutton switch being manually actuated by the second diver;

a second transmitter electrically coupled to the at least the second alert switch and adapted to generate at least a second predetermined electrical transmit signal responsive to receiving the at least the second electrical alert actuation signal, respectively;

a second transmitting element electrically coupled to the second transmitter and adapted to generate at least a second predetermined wireless signal responsive to receiving the at least the second predetermined electrical transmit signal, respectively;

a third power supply adapted to provide a third supply of electrical power;

5 a third power switch adapted to electrically couple the second supply of electrical power to at least one of the at least the second alert switch, the second transmitter and the second transmitting element responsive to the third power switch being actuated; and

a second waterproof transmitter housing adapted to carry at least one of the at least the second alert switch, the second transmitter, the second transmitting element, the third power supply  
10 and the third power switch;

a second receiver assembly, adapted to be carried by the first diver having a second mask adapted to be worn on the first diver's head, including:

a second receiving element adapted to generate at least a second electrical receive signal responsive to receiving the at least the second predetermined wireless signal, respectively;

15 a second receiver electrically coupled to the second receiving element and adapted to generate at least a second predetermined electrical alert attention signal responsive to receiving the at least the second electrical receive signal, respectively;

at least a second alert device electrically coupled to the second receiver and adapted to generate at least a second predetermined alert responsive to receiving the at least the second predetermined electrical alert attention signal, wherein the at least the second alert device further  
20 comprises:

a second visual alert device adapted to generate a predetermined visual alert, as the at least the second predetermined alert, that the first diver can see when wearing the second mask, wherein the second visual alert device further comprises:

25 a second light source adapted to generate a second predetermined visible light signal, as the second predetermined visual alert;

a fourth power supply adapted to provide a fourth supply of electrical power;

a fourth power switch adapted to electrically couple the fourth supply of electrical power to at least one of the second receiving element, the second receiver and the at least the second alert  
30 device responsive to the fourth power switch being actuated; and

a second waterproof receiver housing adapted to carry at least one of the second receiving element, the second receiver, the at least the second alert device, the fourth power supply and the fourth power switch;

5 wherein the second mask is adapted to carry at least the at least the second alert device of the second receiver assembly in a way that permits the at least the second predetermined alert to gain the attention of the first diver when the second mask is worn on the first diver's head; and

a second attachment mechanism adapted to permit the second waterproof receiver housing to be mechanically coupled to the second mask.

10 213. (New) The underwater alert system according to claim 212,

wherein the first waterproof transmitter housing and the second waterproof receiver housing are integrally formed together to provide a first transceiver housing adapted to be carried by the second mask,

15 wherein the first power supply and the fourth power supply are integrally formed together to provide a first transceiver power supply adapted to be carried by the first transceiver housing;

wherein the first power switch and the fourth power switch are integrally formed together to provide a first transceiver power switch adapted to be carried by the first transceiver housing;

20 wherein the second waterproof transmitter housing and the first waterproof receiver housing are integrally formed together to provide a second transceiver housing adapted to be carried by the first mask;

wherein the second power supply and the third power supply are integrally formed together to provide a second transceiver power supply adapted to be carried by the second transceiver housing; and

25 wherein the second power switch and the third power switch are integrally formed together to provide a second transceiver power switch adapted to be carried by the second transceiver housing.

214. (New) The underwater alert system according to claim 213,

wherein the first transceiver housing is integrally formed with the second mask, and

30 wherein the second transceiver housing is integrally formed with the first mask.

215. (New) The underwater alert system according to claim 211, wherein the first attachment mechanism further comprises:

a first bracket adapted to be carried by the first mask and having a first mounting interface adapted to mechanically engage and disengage a first mounting interface on the first waterproof receiver housing to permit the first waterproof receiver housing to be attached to and removed from, respectively, the first bracket.

216. (New) The underwater alert system according to claim 215, wherein the first bracket further comprises:

a second mounting interface having an adhesive disposed thereon to permit the second mounting interface of the first bracket to be mechanically coupled to the first mask.

217. (New) The underwater alert system according to claim 215, wherein the first bracket is integrally formed with the first mask.

218. (New) The underwater alert system according to claim 211, wherein the first light source generates the first predetermined visible light signal when the first waterproof receiver housing is mechanically coupled to the first mask, and wherein a second alert device generates a second predetermined alert when the first waterproof receiver housing is mechanically decoupled from the first mask.

219. (New) The underwater alert system according to claim 211:

wherein the first transmitter assembly further comprises a first transmitter identity selection device adapted to provide the first transmitter with at least a first transmitter identity, and

wherein the first receiver assembly further comprises a first receiver identity selection device adapted to provide the first receiver with the at least the first transmitter identity to permit the first receiver to communicate with the first transmitter.

220. (New) The underwater alert system according to claim 211, wherein at least one of the first power switch and the second power switch further comprises:

a water-activated switch adapted to be actuated responsive to the water-activated switch being located underwater.

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221. (New) The underwater alert system according to claim 211, further comprising:

a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

wherein the at least the first alert switch further comprises:

10 an electronic switch electrically coupled to the dive computer and adapted to generate the at least the first electrical alert actuation signal responsive to the dive computer data being an undesirable, predetermined value.

222. (New) The underwater alert system according to claim 211, further comprising:

15 a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

wherein the first transmitter is adapted to transmit dive computer data, associated with the dive computer, to the first receiver.

20 223. (New) The underwater alert system according to claim 211, wherein the first transmitter assembly further comprises:

a light source carried by the first transmitter housing and adapted to illuminate at least a portion of the pushbutton.

25 224. (New) The underwater alert system according to claim 211, wherein the first transmitter assembly further comprises:

a transmitter alert device adapted to generate at least a second predetermined alert responsive to a function of the first transmitter assembly.

30 225. (New) The underwater alert system according to claim 224, wherein the function of the first transmitter assembly further comprises at least one of:

a low voltage warning, a verification of operation, a confirmation of transmitter identity selection, a confirmation of activation of the first alert switch, a confirmation of activation of the power on/off switch, and a condition of the charging circuit.

- 5    226.    (New) The underwater alert system according to claim 224, wherein the transmitter alert device further comprises at least one of:

        a visual alert device adapted to generate a predetermined visual alert, as the at least the second predetermined alert, that the first diver can see when wearing the first transmitter assembly;

- an audible alert device adapted to generate a predetermined audible alert, as the at least the  
10    second predetermined alert, that the first diver can hear when wearing the first transmitter assembly;  
        and

        a tactile alert device adapted to generate a predetermined tactile alert, as the at least the second predetermined alert, that the first diver can feel when wearing the first transmitter assembly.

- 15    227.    (New) The underwater alert system according to claim 211, wherein the at least the first alert switch is automatically actuated responsive to information related to at least one of the first diver's body, equipment and environment.

- 20    228.    (New) The underwater alert system according to claim 211, wherein the at least the first alert device generates the first predetermined alert when the first waterproof receiver housing is above water, and wherein the at least the first alert device generates a second predetermined alert when the first waterproof receiver housing is underwater.

229. (New) An underwater alert system comprising:

a first transmitter assembly, adapted to be carried by a first diver, including:

at least a first alert switch adapted to generate at least a first electrical alert actuation signal responsive to the at least the first alert switch being actuated;

5 a first transmitter electrically coupled to the at least the first alert switch and adapted to generate at least a first predetermined electrical transmit signal responsive to receiving the at least the first electrical alert actuation signal, respectively;

a first transmitting element electrically coupled to the first transmitter and adapted to generate at least a first predetermined wireless signal responsive to receiving the at least the first  
10 predetermined electrical transmit signal, respectively;

a first waterproof transmitter housing adapted to carry at least one of the at least the first alert switch, the first transmitter and the first transmitting element;

a first receiver assembly, adapted to be carried by a second diver, including:

a first receiving element adapted to generate at least a first electrical receive signal  
15 responsive to receiving the at least the first predetermined wireless signal, respectively;

a first receiver electrically coupled to the first receiving element and adapted to generate at least a first predetermined electrical alert attention signal responsive to receiving the at least the first electrical receive signal, respectively;

at least a first alert device electrically coupled to the first receiver and adapted to generate  
20 at least a first predetermined alert responsive to receiving the at least the first predetermined electrical alert attention signal;

a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver and the at least the first alert device; and

a first mask adapted to be worn on the second diver's head and adapted to carry at least the at  
25 least the first alert device of the first receiver assembly in a way that permits the at least the first predetermined alert to gain the attention of the second diver when the first mask is worn on the second diver's head, wherein the first waterproof receiver housing is integrally formed with the first mask.

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230. (New) The underwater alert system according to claim 229, wherein the at least the first alert switch further comprises:

at least a first pushbutton switch adapted to generate the at least the first electrical alert actuation signal responsive to the at least the first pushbutton switch being manually actuated by the  
5 first diver.

231. (New) The underwater alert system according to claim 229, wherein the at least the first alert device further comprises:

a visual alert device adapted to generate a predetermined visual alert, as the at least the first  
10 predetermined alert, that the second diver can see when wearing the first mask.

232. (New) The underwater alert system according to claim 231, wherein the visual alert device further comprises:

a first light source adapted to generate a predetermined visible light signal, as the  
15 predetermined visual alert.

233. (New) The underwater alert system according to claim 229, wherein the at least the first alert device further comprises:

an audible alert device adapted to generate a predetermined audible alert, as the at least the  
20 first predetermined alert, that the second diver can hear when wearing the first mask.

234. (New) The underwater alert system according to claim 233, wherein the audible alert device further comprises:

an electro-acoustic transducer adapted to generate a predetermined audible acoustic signal, as  
25 the predetermined audible alert.

235. (New) The underwater alert system according to claim 229, wherein the at least the first alert device further comprises:

a tactile alert device adapted to generate a predetermined tactile alert, as the at least the first  
30 predetermined alert, that the second diver can feel when wearing the first mask.



236. (New) The underwater alert system according to claim 235, wherein the tactile alert device further comprises:

a vibrator adapted to generate a predetermined vibration signal, as the predetermined tactile alert.

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237. (New) The underwater alert system according to claim 229 further comprising:

a second transmitter assembly adapted to be carried by the second diver and including:

at least a second alert switch adapted to generate at least a second electrical alert actuation signal responsive to the at least the second alert switch being actuated;

10 a second transmitter electrically coupled to the at least the second alert switch and adapted to generate at least a second predetermined electrical transmit signal responsive to receiving the at least the second electrical alert actuation signal, respectively;

a second transmitting element electrically coupled to the second transmitter and adapted to generate at least a second predetermined wireless signal responsive to receiving the at least the  
15 second predetermined electrical transmit signal, respectively; and

a second waterproof transmitter housing adapted to carry at least one of the at least the second alert switch, the second transmitter and the second transmitting element;

a second receiver assembly, adapted to be carried by the first diver, including:

20 a second receiving element adapted to generate at least a second electrical receive signal responsive to receiving the at least the second predetermined wireless signal, respectively;

a second receiver electrically coupled to the second receiving element and adapted to generate at least a second predetermined electrical alert attention signal responsive to receiving the at least the second electrical receive signal, respectively;

25 at least a second alert device electrically coupled to the second receiver and adapted to generate at least a second predetermined alert responsive to receiving the at least the second predetermined electrical alert attention signal; and

a second waterproof receiver housing adapted to carry at least one of the second receiving element, the second receiver and the at least the second alert device; and

30 a second mask adapted to be worn on the first diver's head and adapted to carry at least the at least the second alert device of the second receiver assembly in a way that permits the at least the second predetermined alert to gain the attention of the first diver when the second mask is worn on

the first diver's head, wherein the second waterproof receiver housing is integrally formed with the second mask.

238. (New) The underwater alert system according to claim 237,

wherein the first waterproof transmitter housing and the second waterproof receiver housing are integrally formed with the second mask to provide a first transceiver housing, and

wherein the second waterproof transmitter housing and the first waterproof receiver housing are integrally formed with the first mask to provide a second transceiver housing.

239. (New) The underwater alert system according to claim 229,

wherein the first transmitter assembly further comprises a first transmitter identity selection device adapted to provide the first transmitter with at least a first transmitter identity, and

wherein the first receiver assembly further comprises a first receiver identity selection device adapted to provide the first receiver with the at least the first transmitter identity to permit the first receiver to communicate with the first transmitter.

240. (New) The underwater alert system according to claim 229,

wherein the first transmitter assembly further comprises:

a first power supply adapted to provide a first supply of electrical power; and

a first power switch adapted to electrically couple the first supply of electrical power to at least one of the at least the first alert switch, the first transmitter and the first transmitting element responsive to the first power switch being actuated, and

wherein the first receiver assembly further comprises:

a second power supply adapted to provide a second supply of electrical power; and

a second power switch adapted to electrically couple the second supply of electrical power to at least one of the first receiving element, the first receiver and the at least the first alert device responsive to the second power switch being actuated.

241. (New) The underwater alert system according to claim 240, wherein at least one of the first power switch and the second power switch further comprises:

a water-activated switch adapted to be actuated responsive to the water-activated switch being located underwater.

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242. (New) The underwater alert system according to claim 229 further comprising:

a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

wherein the at least the first alert switch further comprises:

10 an electronic switch electrically coupled to the dive computer and adapted to generate the at least the first electrical alert actuation signal responsive to the dive computer data being an undesirable, predetermined value.

243. (New) The underwater alert system according to claim 229 further comprising:

15 a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

wherein the first transmitter is adapted to transmit dive computer data, associated with the dive computer, to the first receiver.

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244. (New) In an underwater alert system including a first transmitter assembly adapted to be carried by a first diver and a first receiver assembly adapted to be carried by a second diver having a first mask adapted to be worn on the second diver's head, the first transmitter assembly comprising:

at least a first alert switch adapted to generate at least a first electrical alert actuation signal responsive to the at least the first alert switch being actuated;

a first transmitter electrically coupled to the at least the first alert switch and adapted to generate at least a first predetermined electrical transmit signal responsive to receiving the at least the first electrical alert actuation signal, respectively;

a first transmitting element electrically coupled to the first transmitter and adapted to generate at least a first predetermined wireless signal responsive to receiving the at least the first predetermined electrical transmit signal, respectively; and

a first waterproof transmitter housing adapted to carry at least one of the at least the first alert switch, the first transmitter and the first transmitting element;

wherein the first receiver assembly includes:

a first receiving element adapted to generate at least a first electrical receive signal responsive to receiving the at least the first predetermined wireless signal, respectively;

a first receiver electrically coupled to the first receiving element and adapted to generate at least a first predetermined electrical alert attention signal responsive to receiving the at least the first electrical receive signal, respectively;

at least a first alert device electrically coupled to the first receiver and adapted to generate at least a first predetermined alert responsive to receiving the at least the first predetermined electrical alert attention signal; and

a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver and the at least the first alert device;

wherein the first mask is adapted to carry at least the at least the first alert device of the first receiver assembly in a way that permits the at least the first predetermined alert to gain the attention of the second diver when the first mask is worn on the second diver's head.

245. (New) The first transmitter assembly according to claim 244, wherein the at least the first alert switch further comprises:

at least a first pushbutton switch adapted to generate the at least the first electrical alert actuation signal responsive to the at least the first pushbutton switch being manually actuated by the first diver.

246. (New) The first transmitter assembly according to claim 244:

wherein the first diver has a second mask adapted to be worn on the first diver's head, and wherein the first waterproof transmitter housing is adapted to be carried by the second mask.

247. (New) The first transmitter assembly according to claim 246:

wherein the first waterproof transmitter housing is integrally formed with the second mask.

248. (New) The first transmitter assembly according to claim 244 further comprising:

a first transmitter identity selection device adapted to provide the first transmitter with at least a first transmitter identity,

wherein the first receiver assembly further comprises a first receiver identity selection device adapted to provide the first receiver with the at least the first transmitter identity to permit the first receiver to communicate with the first transmitter.

249. (New) The first transmitter assembly according to claim 244 further comprising:

a first power supply adapted to provide a first supply of electrical power; and

a first power switch adapted to electrically couple the first supply of electrical power to at least one of the at least the first alert switch, the first transmitter and the first transmitting element responsive to the first power switch being actuated.

250. (New) The first transmitter assembly according to claim 249, wherein at least one of the first power switch and the second power switch further comprises:

a water-activated switch adapted to be actuated responsive to the water-activated switch being located underwater.

251. (New) The first transmitter assembly according to claim 244 further comprising:

a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

wherein the at least the first alert switch further comprises:

5 an electronic switch electrically coupled to the dive computer and adapted to generate the at least the first electrical alert actuation signal responsive to the dive computer data being an undesirable, predetermined value.

252. (New) The first transmitter assembly according to claim 244 further comprising:

10 a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

wherein the first transmitter is adapted to transmit dive computer data, associated with the dive computer, to the first receiver.

15 253. (New) The first transmitter assembly according to claim 244 further comprising:

a light source carried by the first transmitter housing and adapted to illuminate at least a portion of the pushbutton.

254. (New) The first transmitter assembly according to claim 244 further comprising:

20 a transmitter alert device adapted to generate at least a second predetermined alert responsive to a function of the first transmitter assembly.

255. (New) The first transmitter assembly according to claim 254, wherein the function of the first transmitter assembly further comprises at least one of:

25 a low voltage warning, a verification of operation, a confirmation of transmitter identity selection, a confirmation of activation of the first alert switch, a confirmation of activation of the power on/off switch, and a condition of the charging circuit.

256. (New) The first transmitter assembly according to claim 254, wherein the transmitter alert  
30 device further comprises at least one of:

a visual alert device adapted to generate a predetermined visual alert, as the at least the second predetermined alert, that the first diver can see when wearing the first transmitter assembly;

an audible alert device adapted to generate a predetermined audible alert, as the at least the second predetermined alert, that the first diver can hear when wearing the first transmitter assembly;

5 and

a tactile alert device adapted to generate a predetermined tactile alert, as the at least the second predetermined alert, that the first diver can feel when wearing the first transmitter assembly.

10 257. (New) The first transmitter assembly according to claim 244, wherein the at least the first alert switch is automatically actuated responsive to information related to at least one of the first diver's body, equipment and environment.

258. (New) In an underwater alert system including a first transmitter assembly adapted to be carried by a first diver and a first receiver assembly adapted to be carried by a second diver having a first mask adapted to be worn on the second diver's head, the first receiver assembly comprising:

a first receiving element adapted to generate at least a first electrical receive signal responsive to receiving at least a first predetermined wireless signal, respectively, generated by the first transmitter assembly;

a first receiver electrically coupled to the first receiving element and adapted to generate at least a first predetermined electrical alert attention signal responsive to receiving the at least the first electrical receive signal, respectively;

at least a first alert device electrically coupled to the first receiver and adapted to generate at least a first predetermined alert responsive to receiving the at least the first predetermined electrical alert attention signal; and

a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver and the at least the first alert device,

wherein the first mask is adapted to carry at least the at least the first alert device of the first receiver assembly in a way that permits the at least the first predetermined alert to gain the attention of the second diver when the first mask is worn on the second diver's head.

259. (New) The first receiver assembly according to claim 258, wherein the at least the first alert device further comprises:

a visual alert device adapted to generate a predetermined visual alert, as the at least the first predetermined alert, that the second diver can see when wearing the first mask.

260. (New) The first receiver assembly according to claim 259, wherein the visual alert device further comprises:

a first light source adapted to generate a predetermined visible light signal, as the predetermined visual alert.



261. (New) The first receiver assembly according to claim 258, wherein the at least the first alert device further comprises:

an audible alert device adapted to generate a predetermined audible alert, as the at least the first predetermined alert, that the second diver can hear when wearing the first mask.

5

262. (New) The first receiver assembly according to claim 261, wherein the audible alert device further comprises:

an electro-acoustic transducer adapted to generate a predetermined audible acoustic signal, as the predetermined audible alert.

10

263. (New) The first receiver assembly according to claim 258, wherein the at least the first alert device further comprises:

a tactile alert device adapted to generate a predetermined tactile alert, as the at least the first predetermined alert, that the second diver can feel when wearing the first mask.

15

264. (New) The first receiver assembly according to claim 263, wherein the tactile alert device further comprises:

a vibrator adapted to generate a predetermined vibration signal, as the predetermined tactile alert.

20

265. (New) The first receiver assembly according to claim 258, further comprising:

a first attachment mechanism adapted to permit the first waterproof receiver housing to be mechanically coupled to the first mask.

25 266. (New) The first receiver assembly according to claim 265, wherein the first attachment mechanism further comprises:

a first bracket adapted to be carried by the first mask and having a first mounting interface adapted to mechanically engage and disengage a first mounting interface on the first waterproof receiver housing to permit the first waterproof receiver housing to be attached to and removed from, respectively, the first bracket.

30

267. (New) The first receiver assembly according to claim 266, wherein the first bracket further comprises:

a second mounting interface having an adhesive disposed thereon to permit the second mounting interface of the first bracket to be mechanically coupled to the first mask.

5

268. (New) The first receiver assembly according to claim 266, wherein the first bracket is integrally formed with the first mask.

269. (New) The first receiver assembly according to claim 265, wherein the at least the first alert device generates the first predetermined alert when the first waterproof receiver housing is mechanically coupled to the first mask, and wherein the at least the first alert device generates a second predetermined alert when the first waterproof receiver housing is mechanically decoupled from the first mask.

10 270. (New) The first receiver assembly according to claim 258, wherein the first waterproof receiver housing is integrally formed with the first mask.

271. (New) The first receiver assembly according to claim 258, wherein the first receiver assembly further comprises a first receiver identity selection device adapted to provide the first receiver with the at least the first transmitter identity, associated with the first transmitter, to permit the first receiver to communicate with the first transmitter.

272. (New) The first receiver assembly according to claim 258, further comprising:  
a second power supply adapted to provide a second supply of electrical power; and  
25 a second power switch adapted to electrically couple the second supply of electrical power to at least one of the first receiving element, the first receiver and the at least the first alert device responsive to the second power switch being actuated.

273. (New) The first receiver assembly according to claim 272, wherein the second power switch further comprises:

30

a water-activated switch adapted to be actuated responsive to the water-activated switch being located underwater.

274. (New) The first receiver assembly according to claim 258, wherein the first predetermined  
5 electrical alert attention signal is representative of dive computer data, having an undesirable, predetermined value, associated with a dive computer, electrically coupled to the first transmitter assembly and adapted to be carried by the first diver.

275. (New) The first receiver assembly according to claim 258, wherein the first receiver is  
10 adapted to receive dive computer data associated with a dive computer, electrically coupled to the first transmitter assembly and adapted to be carried by the first diver.

276. (New) The first receiver assembly according to claim 258, wherein the at least the first alert  
15 device generates the first predetermined alert when the first waterproof receiver housing is above water, and wherein the at least the first alert device generates a second predetermined alert when the first waterproof receiver housing is underwater.

277. (New) In an underwater alert system including a first transmitter assembly adapted to be carried by a first diver, a first receiver assembly adapted to be carried by a second diver and a mask adapted to be worn on the second diver's head, the mask comprising:

5 a first receiving element adapted to generate at least a first electrical receive signal responsive to receiving at least a first predetermined wireless signal, respectively, generated by the first transmitter assembly;

a first receiver electrically coupled to the first receiving element and adapted to generate at least a first predetermined electrical alert attention signal responsive to receiving the at least the first electrical receive signal, respectively;

10 at least a first alert device electrically coupled to the first receiver and adapted to generate at least a first predetermined alert responsive to receiving the at least the first predetermined electrical alert attention signal; and

a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver and the at least the first alert device,

15 wherein at least the at least the first alert device of the first receiver assembly is carried on the mask in a way that permits the at least the first predetermined alert to gain the attention of the second diver when the mask is worn on the second diver's head.

278. (New) An underwater alert system comprising:

means for providing a first transmitter assembly, adapted to be carried by a first diver, including:

means for generating at least a first electrical alert actuation signal;

5 means for generating at least a first predetermined electrical transmit signal responsive to receiving the at least the first electrical alert actuation signal, respectively;

means for generating at least a first predetermined wireless signal responsive to receiving the at least the first predetermined electrical transmit signal, respectively; and

10 means for carrying at least one of the means for generating the at least a first electrical alert actuation signal, the means for generating the at least the first predetermined electrical transmit signal, and the means for generating the at least the first predetermined wireless signal; and

means for providing a receiver assembly, adapted to be carried by a second diver having an mask adapted to be worn on the second diver's head, including:

15 means for generating at least a first electrical receive signal responsive to receiving the at least the first predetermined wireless signal, respectively;

means for generating at least a first predetermined electrical alert attention signal responsive to receiving the at least the first electrical receive signal, respectively;

means for generating at least a first predetermined alert responsive to receiving the at least the first predetermined electrical alert attention signal; and

20 means for carrying at least one of the means for generating the at least the first electrical receive signal, the means for generating the at least the first predetermined electrical alert attention signal, and the means for generating the at least the first predetermined alert,

25 wherein the first mask is adapted to carry at least the at least the means for generating the at least the first predetermined alert in a way that permits the at least the first predetermined alert to gain the attention of the second diver when the first mask is worn on the second diver's head.

279. (New) An underwater alert system comprising:

a first transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting a first predetermined wireless signal; and

5 a first receiver assembly, adapted to be carried by a second diver while the second diver is underwater, including:

a first alert device, adapted to be carried by a first mask to be worn on the second diver's head, for generating a first predetermined alert that gains the attention of the second diver when the first mask is worn on the second diver's head responsive to receiving the first predetermined wireless signal.

10

280. (New) The underwater alert system according to claim 279, wherein the at least the first transmitter assembly further comprises:

a pushbutton switch adapted to generate the an electrical alert actuation signal responsive to the pushbutton switch being manually actuated by the first diver.

15

281. (New) The underwater alert system according to claim 279, wherein the first alert device further comprises:

a visual alert device adapted to generate a predetermined visual alert, as the first predetermined alert, which the second diver can see when wearing the first mask.

20

282. (New) The underwater alert system according to claim 279, wherein the first alert device further comprises:

an audible alert device adapted to generate a predetermined audible alert, as the first predetermined alert, which the second diver can hear when wearing the first mask.

25

283. (New) The underwater alert system according to claim 279, wherein the first alert device further comprises:

a tactile alert device adapted to generate a predetermined tactile alert, as the first predetermined alert, which the second diver can feel when wearing the first mask.

30

284. (New) The underwater alert system according to claim 279, further comprising:

a second transmitter assembly, adapted to be carried by the second diver while the second diver is underwater, for transmitting a second predetermined wireless signal; and

a second receiver assembly, adapted to be carried by the first diver while the first diver is  
5 underwater, including:

a second alert device, adapted to be carried by a second mask to be worn on the first diver's head, for generating a second predetermined alert that gains the attention of the first diver when the second mask is worn on the first diver's head responsive to receiving the second predetermined wireless signal.

10 285. (New) The underwater alert system according to claim 279, further comprising:

a first attachment mechanism adapted to permit the first receiver assembly to be mechanically coupled to the first mask.

15 286. (New) The underwater alert system according to claim 285, wherein the first alert device generates the first predetermined alert when the first receiver assembly is mechanically coupled to the first mask, and wherein the first alert device generates a second predetermined alert when the first receiver assembly is mechanically decoupled from the first mask.

20 287. (New) The underwater alert system according to claim 279, wherein the first receiver assembly is integrally formed with the first mask.

288. (New) The underwater alert system according to claim 279,

25 wherein the first transmitter assembly further comprises a first transmitter identity selection device adapted to provide the first transmitter assembly with at least a first transmitter identity, and

wherein the first receiver assembly further comprises a first receiver identity selection device adapted to provide the first receiver assembly with the at least the first transmitter identity to permit the first receiver assembly to communicate with the first transmitter assembly.

289. (New) The underwater alert system according to claim 279,

wherein the first transmitter assembly further comprises:

a first power supply adapted to provide a first supply of electrical power; and

a first power switch adapted to electrically couple the first supply of electrical power to at

5 least one of the at least the first alert switch, the first transmitter and the first transmitting element responsive to the first power switch being actuated, and

wherein the first receiver assembly further comprises:

a second power supply adapted to provide a second supply of electrical power; and

10 a second power switch adapted to electrically couple the second supply of electrical power to at least one of the first receiving element, the first receiver and the at least the first alert device responsive to the second power switch being actuated.

290. (New) The underwater alert system according to claim 279 further comprising:

15 a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

wherein the at least the first alert switch further comprises:

20 an electronic switch electrically coupled to the dive computer and adapted to generate the at least the first electrical alert actuation signal responsive to the dive computer data being an undesirable, predetermined value.

291. (New) The underwater alert system according to claim 279 further comprising:

a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

25 wherein the first transmitter is adapted to transmit dive computer data, associated with the dive computer, to the first receiver.

292. (New) The underwater alert system according to claim 279, wherein the first transmitter assembly further comprises:

30 a transmitter alert device adapted to generate at least a second predetermined alert responsive to a function of the first transmitter assembly.



293. (New) The underwater alert system according to claim 279, wherein the first predetermined wireless signal is automatically transmitted responsive to information related to at least one of the first diver's body, equipment and environment.

5 294. (New) The underwater alert system according to claim 279, wherein the first alert device generates the first predetermined alert when the first receiver assembly is above water, and wherein the first alert device generates a second predetermined alert when the first receiver assembly is underwater.

10 295. (New) The underwater alert system according to any one of the preceding one hundred twelve claims numbered 183 to 294, wherein the first transmitter assembly further comprises:

15 a second attachment mechanism adapted to permit the first transmitter assembly to be mechanically coupled to the first diver's body or to equipment worn on the first diver's body at a location disposed below the first diver's head relative to the first diver being in an upright, standing position.

296. (New) The underwater alert system according to claim 295, wherein the second attachment mechanism further comprises at least one of:

a wristband, a strap, a cord, a band, a belt, a clip, and a clamp.

20

297. (New) An underwater alert system comprising:

a first transmitter assembly, adapted to be carried by a first diver, including:

at least a first alert switch adapted to generate at least a first electrical alert actuation signal responsive to the at least the first alert switch being actuated, wherein the at least the first alert

5 switch further comprises:

at least a first pushbutton switch adapted to generate the at least the first electrical alert actuation signal responsive to the at least the first pushbutton switch being manually actuated by the first diver;

10 a first transmitter electrically coupled to the at least the first alert switch and adapted to generate at least a first predetermined electrical transmit signal responsive to receiving the at least the first electrical alert actuation signal, respectively;

a first transmitting element electrically coupled to the first transmitter and adapted to generate at least a first predetermined wireless signal responsive to receiving the at least the first predetermined electrical transmit signal, respectively;

15 a first waterproof transmitter housing adapted to carry at least one of the at least the first alert switch, the first transmitter and the first transmitting element; and

a second attachment mechanism adapted to permit the first waterproof transmitter housing to be mechanically coupled to the first diver's body to the first diver being in an upright, standing position, wherein the second attachment mechanism or to equipment worn on the first  
20 diver's body at a location disposed below the first diver's head relative further comprises at least one of:

a wristband, a strap, a cord, a band, a belt, a clip, and a clamp; and

a first receiver assembly, adapted to be carried by a second diver having a first mask adapted to be worn on the second diver's head, including:

25 a first receiving element adapted to generate at least a first electrical receive signal responsive to receiving the at least the first predetermined wireless signal, respectively;

a first receiver electrically coupled to the first receiving element and adapted to generate at least a first predetermined electrical alert attention signal responsive to receiving the at least the first electrical receive signal, respectively;

at least a first alert device electrically coupled to the first receiver and adapted to generate at least a first predetermined alert responsive to receiving the at least the first predetermined electrical alert attention signal; and

5 a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver and the at least the first alert device;

wherein the first mask is adapted to carry at least the at least the first alert device of the first receiver assembly in a way that permits the at least the first predetermined alert to gain the attention of the second diver when the first mask is worn on the second diver's head.

10 298. (New) The underwater alert system according to claim 297, wherein the at least the first alert device further comprises:

a visual alert device adapted to generate a predetermined visual alert, as the at least the first predetermined alert, that the second diver can see when wearing the first mask.

15 299. (New) The underwater alert system according to claim 298, wherein the visual alert device further comprises:

a first light source adapted to generate a predetermined visible light signal, as the predetermined visual alert.

20 300. (New) The underwater alert system according to claim 297, wherein the at least the first alert device further comprises:

an audible alert device adapted to generate a predetermined audible alert, as the at least the first predetermined alert, that the second diver can hear when wearing the first mask.

25 301. (New) The underwater alert system according to claim 300, wherein the audible alert device further comprises:

an electro-acoustic transducer adapted to generate a predetermined audible acoustic signal, as the predetermined audible alert.

30

302. (New) The underwater alert system according to claim 297, wherein the at least the first alert device further comprises:

a tactile alert device adapted to generate a predetermined tactile alert, as the at least the first predetermined alert, that the second diver can feel when wearing the first mask.

5

303. (New) The underwater alert system according to claim 302, wherein the tactile alert device further comprises:

a vibrator adapted to generate a predetermined vibration signal, as the predetermined tactile alert.

10

304. (New) The underwater alert system according to claim 297, further comprising:

a second transmitter assembly adapted to be carried by the second diver and including:

at least a second alert switch adapted to generate at least a second electrical alert actuation signal responsive to the at least the second alert switch being actuated, wherein the at least the second alert switch further comprises:

15

at least a second pushbutton switch adapted to generate the at least the second electrical alert actuation signal responsive to the at least the second pushbutton switch being manually actuated by the second diver;

a second transmitter electrically coupled to the at least the second alert switch and adapted to generate at least a second predetermined electrical transmit signal responsive to receiving the at least the second electrical alert actuation signal, respectively;

20

a second transmitting element electrically coupled to the second transmitter and adapted to generate at least a second predetermined wireless signal responsive to receiving the at least the second predetermined electrical transmit signal, respectively;

25

a second waterproof transmitter housing adapted to carry at least one of the at least the second alert switch, the second transmitter and the second transmitting element; and

a second attachment mechanism adapted to permit the second waterproof transmitter housing to be mechanically coupled to the second diver's body or to equipment worn on the second diver's body at a location disposed below the second diver's head relative to the second diver being in an upright, standing position, wherein the second attachment mechanism further comprises at least one of:

30

a wristband, a strap, a cord, a band, a belt, a clip, and a clamp; and

a second receiver assembly, adapted to be carried by the first diver having a second mask adapted to be worn on the first diver's head, including:

a second receiving element adapted to generate at least a second electrical receive signal responsive to receiving the at least the second predetermined wireless signal, respectively;

a second receiver electrically coupled to the second receiving element and adapted to generate at least a second predetermined electrical alert attention signal responsive to receiving the at least the second electrical receive signal, respectively;

at least a second alert device electrically coupled to the second receiver and adapted to generate at least a second predetermined alert responsive to receiving the at least the second predetermined electrical alert attention signal; and

a second waterproof receiver housing adapted to carry at least one of the second receiving element, the second receiver and the at least the second alert device; and

wherein the second mask is adapted to carry at least the at least the second alert device of the second receiver assembly in a way that permits the at least the second predetermined alert to gain the attention of the first diver when the second mask is worn on the first diver's head.

305. (New) The underwater alert system according to claim 297, further comprising:

a first attachment mechanism adapted to permit the first waterproof receiver housing to be mechanically coupled to the first mask.

306. (New) The underwater alert system according to claim 305, wherein the first attachment mechanism further comprises:

a first bracket adapted to be carried by the first mask and having a first mounting interface adapted to mechanically engage and disengage a first mounting interface on the first waterproof receiver housing to permit the first waterproof receiver housing to be attached to and removed from, respectively, the first bracket.

307. (New) The underwater alert system according to claim 306, wherein the first bracket further comprises:

a second mounting interface having an adhesive disposed thereon to permit the second mounting interface of the first bracket to be mechanically coupled to the first mask.

308. (New) The underwater alert system according to claim 306, wherein the first bracket is  
5 integrally formed with the first mask.

309. (New) The underwater alert system according to claim 305, wherein the at least the first alert device generates the first predetermined alert when the first waterproof receiver housing is mechanically coupled to the first mask, and wherein the at least the first alert device generates a  
10 second predetermined alert when the first waterproof receiver housing is mechanically decoupled from the first mask.

310. (New) The underwater alert system according to claim 297, wherein the first waterproof receiver housing is integrally formed with the first mask.

311. (New) The underwater alert system according to claim 297,  
wherein the first transmitter assembly further comprises a first transmitter identity selection device adapted to provide the first transmitter with at least a first transmitter identity, and  
wherein the first receiver assembly further comprises a first receiver identity selection device  
20 adapted to provide the first receiver with the at least the first transmitter identity to permit the first receiver to communicate with the first transmitter.

312. (New) The underwater alert system according to claim 297,  
wherein the first transmitter assembly further comprises:  
25 a first power supply adapted to provide a first supply of electrical power; and  
a first power switch adapted to electrically couple the first supply of electrical power to at least one of the at least the first alert switch, the first transmitter and the first transmitting element responsive to the first power switch being actuated, and  
wherein the first receiver assembly further comprises:  
30 a second power supply adapted to provide a second supply of electrical power; and

a second power switch adapted to electrically couple the second supply of electrical power to at least one of the first receiving element, the first receiver and the at least the first alert device responsive to the second power switch being actuated.

5     313.   (New) The underwater alert system according to claim 312, wherein at least one of the first power switch and the second power switch further comprises:

        a water-activated switch adapted to be actuated responsive to the water-activated switch being located underwater.

10    314.   (New) The underwater alert system according to claim 297 further comprising:

        a dive computer adapted to generate dive computer data, electrically coupled to the first transmitter, and adapted to be carried by the first diver,

        wherein the at least the first alert switch further comprises:

        an electronic switch electrically coupled to the dive computer and adapted to generate the  
15    at least the first electrical alert actuation signal responsive to the dive computer data being an undesirable, predetermined value.

315.   (New) The underwater alert system according to claim 297 further comprising:

        a dive computer adapted to generate dive computer data, electrically coupled to the first  
20    transmitter, and adapted to be carried by the first diver,

        wherein the first transmitter is adapted to transmit dive computer data, associated with the dive computer, to the first receiver.

316.   (New) The underwater alert system according to claim 297, wherein the first transmitter  
25    assembly further comprises:

        a light source carried by the first transmitter housing and adapted to illuminate at least a portion of the pushbutton.

317.   (New) The underwater alert system according to claim 297, wherein the first transmitter  
30    assembly further comprises:

a transmitter alert device adapted to generate at least a second predetermined alert responsive to a function of the first transmitter assembly.

318. (New) The underwater alert system according to claim 317, wherein the function of the first transmitter assembly further comprises at least one of:

a low voltage warning, a verification of operation, a confirmation of transmitter identity selection, a confirmation of activation of the first alert switch, a confirmation of activation of the power on/off switch, and a condition of the charging circuit.

319. (New) The underwater alert system according to claim 317, wherein the transmitter alert device further comprises at least one of:

a visual alert device adapted to generate a predetermined visual alert, as the at least the second predetermined alert, that the first diver can see when wearing the first transmitter assembly;

an audible alert device adapted to generate a predetermined audible alert, as the at least the second predetermined alert, that the first diver can hear when wearing the first transmitter assembly; and

a tactile alert device adapted to generate a predetermined tactile alert, as the at least the second predetermined alert, that the first diver can feel when wearing the first transmitter assembly.

320. (New) The underwater alert system according to claim 297, wherein the at least the first alert switch is automatically actuated responsive to information related to at least one of the first diver's body, equipment and environment.

321. (New) The underwater alert system according to claim 297, wherein the at least the first alert device generates the first predetermined alert when the first waterproof receiver housing is above water, and wherein the at least the first alert device generates a second predetermined alert when the first waterproof receiver housing is underwater.



322. (New) An underwater alert system comprising:

at least a one transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting at least one wireless signal responsive to receiving first dive computer data related to at least one of the first diver's body, equipment, and environment;

5 a first receiver assembly, adapted to be carried by a second diver while the second diver is underwater, for communicating to the second diver first information related to the first dive computer data responsive to receiving the at least one wireless signal over a first wireless communication link, having a first range, between the at least one transmitter assembly and the first receiver assembly; and

10 a second receiver assembly, adapted to be carried by the first diver while the first diver is underwater, for communicating to the first diver second information related to the first dive computer data responsive to receiving the at least one wireless signal over a second wireless communication link, having a second range, between the at least one transmitter assembly and the second receiver assembly.

15 323. (New) The underwater alert system according to claim 322, wherein at least one of the first receiver assembly and the second receiver assembly further comprises:

at least a first alert device electrically adapted to generate at least a first alert responsive to receiving the at least one wireless signal.

20 324. (New) The underwater alert system according to claim 323, wherein the at least the first alert device further comprises:

a visual alert device adapted to generate a visual alert, as the at least the first alert, that a diver can see.

25 325. (New) The underwater alert system according to claim 324, wherein the visual alert device further comprises:

a first light source adapted to generate a visible light signal, as the visual alert.

30 326. (New) The underwater alert system according to claim 324, wherein the visual alert device further comprises:

a first display adapted to display the first dive computer data, as the visual alert.

327. (New) The underwater alert system according to claim 323, wherein the at least the first alert device further comprises:

5           an audible alert device adapted to generate an audible alert, as the at least the first alert, that a diver can hear.

328. (New) The underwater alert system according to claim 327, wherein the audible alert device further comprises:

10           an electro-acoustic transducer adapted to generate an audible acoustic signal, as the audible alert.

329. (New) The underwater alert system according to claim 323, wherein the at least the first alert device further comprises:

15           a tactile alert device adapted to generate a tactile alert, as the at least the first alert, that a diver can feel.

330. (New) The underwater alert system according to claim 329, wherein the tactile alert device further comprises:

20           a vibrator adapted to generate a vibration signal, as the tactile alert.

331. (New) The underwater alert system according to claim 323 further comprising:

25           a second transmitter assembly, adapted to be carried by the second diver while the second diver is underwater, for transmitting a third wireless signal responsive to receiving second dive computer data related to at least one of the second diver's body, equipment, and environment; and

          a third receiver assembly, adapted to be carried by the first diver while the first diver is underwater, for communicating to the first diver third information related to the second dive computer data responsive to receiving the third wireless signal over a third wireless communication link, having a third range, between the second transmitter assembly and the third receiver assembly.

30

332. (New) The underwater alert system according to claim 331, wherein the second receiver assembly is formed separate from the third receiver assembly to provide two receiver assemblies.

333. (New) The underwater alert system according to claim 331, wherein the second receiver  
5 assembly is integrally formed with the third receiver assembly to provide one receiver assembly.

334. (New) The underwater alert system according to claim 333, wherein the one receiver assembly further comprises:

10 a second display adapted to display at least one of the second information and the third information.

335. (New) The underwater alert system according to claim 334, wherein the second display is adapted to display at least one of:

15 all of each of the second information and the third information at the same time;  
a portion of each of the second information and the third information at the same time;  
at least a portion of the second information at a first time and at least a portion of the third information at a second time, different from the first time.

336. (New) The underwater alert system according to claim 331, wherein at least one of:

20 the first transmitter assembly and the third receiver assembly are integrally formed together to provide a first transceiver assembly adapted to be carried by the first diver, and  
the second transmitter assembly and the first receiver assembly are integrally formed together to provide a second transceiver assembly adapted to be carried by the second diver.

25 337. (New) The underwater alert system according to claim 336, wherein at least one of:

the first transceiver assembly is integrally formed with a second mask adapted to be worn by the first diver, and

the second transceiver assembly is integrally formed with a first mask adapted to be worn by the second diver.

30 338. (New) The underwater alert system according to claim 322 further comprising at least one of:

a first attachment mechanism adapted to permit the first receiver assembly to be mechanically coupled to a first mask adapted to be worn by the second diver; and

a second attachment mechanism adapted to permit the second receiver assembly to be mechanically coupled to a second mask adapted to be worn by the first diver.

5

339. (New) The underwater alert system according to claim 338, wherein at least one of:  
the first attachment mechanism further comprises:

a first bracket adapted to be carried by the first mask and having a first mounting interface adapted to mechanically engage and disengage a first mounting interface on the first receiver assembly to permit the first receiver assembly to be attached to and removed from,  
10 respectively, the first bracket, and

the second attachment mechanism further comprises:

a second bracket adapted to be carried by the second mask and having a first mounting interface adapted to mechanically engage and disengage a first mounting interface on the second receiver assembly to permit the second receiver assembly to be attached to and removed  
15 from, respectively, the second bracket.

340. (New) The underwater alert system according to claim 339, wherein at least one of:  
the first bracket further comprises:

20 a second mounting interface having an adhesive disposed thereon to permit the second mounting interface of the first bracket to be mechanically coupled to the first mask, and  
the second bracket further comprises:

a second mounting interface having an adhesive disposed thereon to permit the second mounting interface of the second bracket to be mechanically coupled to the second mask.

25

341. (New) The underwater alert system according to claim 339, wherein at least one of:  
the first bracket is integrally formed with the first mask, and  
the second bracket is integrally formed with the second mask.

30

342. (New) The underwater alert system according to claim 322, wherein at least one of:

the first receiver assembly is integrally formed with a first mask adapted to be worn by the second diver, and

5 the second receiver assembly is integrally formed with a second mask adapted to be worn by the first diver.

343. (New) The underwater alert system according to claim 322, wherein at least one of:

the first transmitter assembly further comprises:

10 a first transmitter identity selection device adapted to provide the first transmitter assembly with at least a first transmitter identity,

the first receiver assembly further comprises:

a first receiver identity selection device adapted to provide the first receiver assembly with the at least the first transmitter identity to permit the first receiver assembly to communicate  
15 with the first transmitter assembly, and

the second receiver assembly further comprises:

a second receiver identity selection device adapted to provide the second receiver assembly with the at least the first transmitter identity to permit the second receiver assembly to communicate with the first transmitter assembly.

20

344. (New) The underwater alert system according to claim 322, wherein at least one of:

the first transmitter assembly further comprises:

a first power supply adapted to provide a first supply of electrical power; and

a first power switch adapted to electrically couple the first supply of electrical power to at

25 the first transmitter assembly;

the first receiver assembly further comprises:

a second power supply adapted to provide a second supply of electrical power; and

a second power switch adapted to electrically couple the second supply of electrical power to the first receiver assembly, and

30 the second receiver assembly further comprises:

a third power supply adapted to provide a third supply of electrical power; and

a third power switch adapted to electrically couple the third supply of electrical power to the second receiver assembly.

345. (New) The underwater alert system according to claim 344, wherein at least one of the first power switch, the second power switch, and the third power switch further comprises:

a water-activated switch adapted to be actuated responsive to the water-activated switch being located underwater.

346. (New) The underwater alert system according to claim 140, wherein the first transmitter assembly generates the at least one wireless signal responsive to receiving the first dive computer data having an undesirable, predetermined value.

347. (New) The underwater alert system according to claim 322, wherein the first transmitter assembly generates the at least one wireless signal, representing the first dive computer data responsive to receiving the first dive computer data.

348. (New) The underwater alert system according to claim 322 wherein the first dive computer data further comprises at least one of:

dive table time limits, dive time duration, dive depth, air supply level, direction, distance, water temperature, ascent rate, heart rate, and breathing rate.

349. (New) An underwater alert system comprising:

at least one transmitter assembly, adapted to be carried by a first diver, including:

at least one dive computer adapted to generate first dive computer data responsive to receiving information related to at least one of the first diver's body, equipment, and environment;

5 at least one transmitter electrically coupled to the at least one dive computer and adapted to generate at least one electrical transmit signal, representing the first dive computer data, responsive to receiving the first dive computer data;

at least one transmitting element electrically coupled to the at least one transmitter and adapted to generate at least one wireless signal responsive to receiving the at least one electrical transmit signal; and

10 at least one waterproof transmitter housing adapted to carry at least one of the at least one dive computer, the at least one transmitter, and the at least one transmitting element; and

a first receiver assembly, adapted to be carried by a second diver, including:

15 a first receiving element adapted to generate at least a first electrical receive signal responsive to receiving the at least one wireless signal over a first wireless communication link, having a first range, between the at least one transmitter assembly and the first receiver assembly;

a first receiver electrically coupled to the first receiving element and adapted to generate at least a first electrical alert attention signal responsive to receiving the at least the first electrical receive signal;

20 at least a first alert device electrically coupled to the first receiver and adapted to generate at least a first alert responsive to receiving the at least the first electrical alert attention signal, wherein the at least the first alert device further comprises:

a first visual alert device adapted to generate a first visual alert, as the at least the first alert, that the second diver can see, wherein the first visual alert device further comprises:

25 a first display adapted to display the first dive computer data, as the visual alert; and

a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver, and the at least the first alert device; and

a second receiver assembly, adapted to be carried by the first diver, including:

30 a second receiving element adapted to generate at least a second electrical receive signal responsive to receiving the at least one wireless signal over a second wireless communication link,

having a second range, between the at least one transmitter assembly and the second receiver assembly;

a second receiver electrically coupled to the second receiving element and adapted to generate at least a second electrical alert attention signal responsive to receiving the at least the  
5 second electrical receive signal;

at least a second alert device electrically coupled to the second receiver and adapted to generate at least a second alert responsive to receiving the at least the second electrical alert attention signal, wherein the at least the second alert device further comprises:

a second visual alert device adapted to generate a second visual alert, as the at  
10 least the second alert, that the first diver can see, wherein the second visual alert device further comprises:

a second display adapted to display the dive computer data, as the second visual alert; and

a second waterproof receiver housing adapted to carry at least one of the second  
15 receiving element, the second receiver, and the at least the second alert device.

350. (New) The underwater alert system according to claim 349 further comprising:

a second transmitter assembly, adapted to be carried by the second diver, including:

a second dive computer adapted to generate second dive computer data responsive to  
20 receiving information related to at least one of the second diver's body, equipment, and environment;

a second transmitter electrically coupled to the second dive computer and adapted to generate at least a second electrical transmit signal responsive to receiving the second dive computer data;

a second transmitting element electrically coupled to the second transmitter and adapted  
25 to generate at least a second wireless signal responsive to receiving the at least the second electrical transmit signal; and

a second waterproof transmitter housing adapted to carry at least one of the second dive computer, the second transmitter, and the second transmitting element; and



a third receiver assembly, adapted to be carried by the first diver, and adapted to be integrally formed with the second receiver assembly to provide a single receiver assembly or separately formed the second receiver assembly to provide two receiver assemblies, including:

5 a third receiving element adapted to generate at least a third electrical receive signal responsive to receiving the at least the second wireless signal;

a third receiver electrically coupled to the third receiving element and adapted to generate at least a third electrical alert attention signal responsive to receiving the at least the third electrical receive signal;

10 at least a third alert device electrically coupled to the third receiver and adapted to generate at least a third alert responsive to receiving the at least the third electrical alert attention signal, wherein the at least the third alert device further comprises:

a second display adapted to display the second dive computer data; and

a third waterproof receiver housing adapted to carry at least one of the third receiving element, the third receiver, and the at least the third alert device.

15 351. (New) The underwater alert system according to claim 350 wherein at least one of the first display and the second display displays at least one of:

all of each of the first dive computer data and the second computer data at the same time;

20 a portion of each of the first dive computer data and the second dive computer data at the same time;

at least a portion of the first dive computer data at a first time and at least a portion of the second dive computer data at a second time, different from the first time.

352. (New) The underwater alert system according to claim 350:

25 wherein the first waterproof transmitter housing and the second waterproof receiver housing are integrally formed together to provide a first transceiver housing adapted to be carried by the first diver, and

30 wherein the second waterproof transmitter housing and the first waterproof receiver housing are integrally formed together to provide a second transceiver housing adapted to be carried by the second diver.

353. (New) The underwater alert system according to claim 349:

wherein the at least one transmitter assembly further comprises a transmitter identity selection device adapted to provide the at least one transmitter assembly with at least a transmitter identity, and

5        wherein the first receiver assembly further comprises a receiver identity selection device adapted to provide the first receiver assembly with the at least the transmitter identity to permit the first receiver assembly to communicate with the at least one transmitter assembly.

10       354. (New) The underwater alert system according to claim 349, wherein the first dive computer data further comprises at least one of:

dive table time limits, dive time duration, dive depth, air supply level, direction, distance, water temperature, ascent rate, heart rate, and breathing rate.

355. (New) An underwater alert system comprising:

at least a first transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting at least one wireless signal responsive to receiving first dive computer data, related to at least one of the first diver's body, equipment, and environment, having a predetermined value; and

a first receiver assembly, adapted to be carried by a second diver while the second diver is underwater, for communicating to the second diver first information related to the first dive computer data responsive to receiving the at least one wireless signal over a first wireless communication link, having a first range, between the at least one transmitter assembly and the first receiver assembly.

356. (New) The underwater alert system according to claim 355 further comprising:

a second receiver assembly, adapted to be carried by the first diver while the first diver is underwater, for communicating to the first diver second information related to the first dive computer data responsive to receiving the at least one wireless signal over a second wireless communication link, having a second range, between the at least one transmitter assembly and the second receiver assembly.

357. (New) The underwater alert system according to claim 355, wherein the at least one wireless signal is predetermined.

358. (New) The underwater alert system according to claim 355, wherein the at least one wireless signal represents the first dive computer data.

359. (New) The underwater alert system according to claim 355, wherein the first receiver assembly further comprises:

at least a first alert device electrically adapted to generate at least a first alert responsive to receiving the at least one wireless signal.

360. (New) The underwater alert system according to claim 359, wherein the first alert is predetermined.

361. (New) The underwater alert system according to claim 359, wherein the at least the first alert device further comprises:

5 a visual alert device adapted to generate a visual alert, as the at least the first alert, that the second diver can see.

362. (New) The underwater alert system according to claim 361, wherein the visual alert device further comprises:

10 a first light source adapted to generate a visible light signal, as the visual alert.

363. (New) The underwater alert system according to claim 359, wherein the at least the first alert device further comprises:

15 an audible alert device adapted to generate a audible alert, as the at least the first alert, that the second diver can hear.

364. (New) The underwater alert system according to claim 363, wherein the audible alert device further comprises:

20 an electro-acoustic transducer adapted to generate a audible acoustic signal, as the audible alert.

365. (New) The underwater alert system according to claim 359, wherein the at least the first alert device further comprises:

25 a tactile alert device adapted to generate a tactile alert, as the at least the first alert, that the second diver can feel.

366. (New) The underwater alert system according to claim 365, wherein the tactile alert device further comprises:

a vibrator adapted to generate a vibration signal, as the tactile alert.

30 367. (New) The underwater alert system according to claim 355 further comprising:

a second transmitter assembly, adapted to be carried by the second diver while the second diver is underwater, for transmitting a third wireless signal responsive to receiving second dive computer data, related to at least one of the second diver's body, equipment, and environment, having a predetermined value; and

5 a third receiver assembly, adapted to be carried by the first diver while the first diver is underwater, for communicating to the first diver third information related to the second dive computer data responsive to receiving the third wireless signal over a third wireless communication link, having a third range, between the second transmitter assembly and the third receiver assembly.

10 368. (New) The underwater alert system according to claim 367,  
wherein the first transmitter assembly and the second receiver assembly are integrally formed together to provide a first transceiver assembly adapted to be carried by the first diver, and  
wherein the second transmitter assembly and the first receiver assembly are integrally formed together to provide a second transceiver assembly adapted to be carried by the second diver.

15 369. (New) The underwater alert system according to claim 368,  
wherein the first transceiver assembly is integrally formed with a second mask adapted to be worn by the first diver, and  
wherein the second transceiver assembly is integrally formed with a first mask adapted to be  
20 worn by the second diver.

370. (New) The underwater alert system according to claim 355,  
wherein the first transmitter assembly further comprises a first transmitter identity selection device adapted to provide the first transmitter assembly with at least a first transmitter identity, and  
25 wherein the first receiver assembly further comprises a first receiver identity selection device adapted to provide the first receiver with the at least the first transmitter identity to permit the first receiver assembly to communicate with the first transmitter assembly.

371. (New) The underwater alert system according to claim 355, wherein the first dive computer  
30 data further comprises at least one of:

dive table time limits, dive time duration, dive depth, air supply level, direction, distance, water temperature, ascent rate, heart rate, and breathing rate.

372. (New) The underwater alert system according to claim 355,

5 wherein the at least the first transmitter assembly further comprises:

a first dive computer adapted to generate the first dive computer data responsive to receiving information related to at least one of the first diver's body, equipment, and environment;

a first transmitter electrically coupled to the first dive computer and adapted to generate at least one electrical transmit signal responsive to receiving the first dive computer data, respectively, having the predetermined value;

10 a first transmitting element electrically coupled to the first transmitter and adapted to generate the at least one wireless signal responsive to receiving the at least one electrical transmit signal, respectively; and

a first waterproof transmitter housing adapted to carry at least one of the first dive computer, the first transmitter, and the first transmitting element; and

15 a first receiver assembly, adapted to be carried by a second diver, including:

a first receiving element adapted to generate at least one electrical receive signal responsive to receiving the at least one wireless signal, respectively;

20 a first receiver electrically coupled to the first receiving element and adapted to generate at least one electrical alert attention signal responsive to receiving the at least one electrical receive signal, respectively;

at least a first alert device electrically coupled to the first receiver and adapted to generate at least one alert responsive to receiving the at least one electrical alert attention signal; and

25 a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver, and the at least the first alert device.

373. (New) An underwater alert system comprising:

at least a one transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting at least one wireless signal responsive to receiving first dive computer data related to at least one of the first diver's body, equipment, and environment;

5        wherein the at least a one transmitter assembly is adapted to transmit the at least one wireless signal to a first receiver assembly, adapted to be carried by a second diver while the second diver is underwater, for communicating to the second diver first information related to the first dive computer data responsive to receiving the at least one wireless signal over a first wireless communication link, having a first range, between the at least one transmitter assembly and the first  
10 receiver assembly; and

       wherein the at least a one transmitter assembly is adapted to transmit the at least one wireless signal to a second receiver assembly, adapted to be carried by the first diver while the first diver is underwater, for communicating to the first diver second information related to the first dive computer data responsive to receiving the at least one wireless signal over a second wireless  
15 communication link, having a second range, between the at least one transmitter assembly and the second receiver assembly.

374. (New) An underwater alert system including at least one transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting at least one wireless signal responsive to receiving first dive computer data related to at least one of the first diver's body, equipment, and environment, the underwater alert system comprising:

5           a first receiver assembly, adapted to be carried by a second diver while the second diver is underwater, for communicating to the second diver first information related to the first dive computer data responsive to receiving at least one wireless signal over a first wireless communication link, having a first range, between the at least one transmitter assembly and the first receiver assembly; and

10           a second receiver assembly, adapted to be carried by the first diver while the first diver is underwater, for communicating to the first diver second information related to the first dive computer data responsive to receiving the at least one wireless signal over a second wireless communication link, having a second range, between the at least one transmitter assembly and the second receiver assembly.

15



375. (New) An underwater alert system comprising:

at least one means for transmitting, adapted to be carried by a first diver while the first diver is underwater, at least one wireless signal responsive to receiving first dive computer data related to at least one of the first diver's body, equipment, and environment;

5 first means for receiving, adapted to be carried by a second diver while the second diver is underwater, the at least one wireless signal over a first wireless communication link, having a first range, between the at least one means for transmitting and the first means for receiving to communicate to the second diver first information related to the first dive computer data; and

10 second means for receiving, adapted to be carried by the first diver while the first diver is underwater, the at least one wireless signal over a second wireless communication link, having a second range, between the at least one means for transmitting and the second means for receiving to communicate to the first diver second information related to the first dive computer data.

376. (New) The underwater alert system according to any one of claims 322 to 375, wherein the  
15 first range is substantially longer than the second range.

377. (New) The underwater alert system according to any one of claims 322 to 375, wherein the first range is substantially the same as the second range.

20 378. (New) The underwater alert system according to any one of claims 322 to 375, wherein the at least one wireless signal further comprises:

a first wireless signal adapted to be transmitted over the first wireless communication link;  
and

25 a second wireless signal, substantially the same as the first wireless signal, adapted to be transmitted over the second wireless communication link.

379. (New) The underwater alert system according to any one of claims 322 to 375, wherein the at least one wireless signal further comprises:

30 a first wireless signal adapted to be transmitted over the first wireless communication link;  
and

a second wireless signal, substantially the different from the first wireless signal, adapted to be transmitted over the second wireless communication link.

380. (New) The underwater alert system according to any one of claims 322 to 374, wherein the at least one transmitter assembly further comprises:

a first transmitter assembly for transmitting a first wireless signal representing the at least one wireless signal, and

a second transmitter assembly for transmitting a second wireless signal representing the at least one wireless signal.

381. (New) The underwater alert system according to any one of claims 322 to 374, wherein the at least one transmitter assembly further comprises:

at least one dive computer adapted to generate the first dive computer data responsive to receiving information related to at least one of the diver's body, equipment, and environment;

at least one transmitter electrically coupled to the at least one dive computer and adapted to generate at least one electrical transmit signal responsive to receiving the first dive computer data;

at least one transmitting element electrically coupled to the at least one transmitter and adapted to generate the at least one wireless signal responsive to receiving the at least one electrical transmit signal; and

at least one waterproof transmitter housing adapted to carry at least one of the at least one dive computer, the at least one transmitter, and the at least one transmitting element,

wherein the first receiver assembly further comprises:

a first receiving element adapted to generate at least a first electrical receive signal responsive to receiving the at least one wireless signal;

a first receiver electrically coupled to the first receiving element and adapted to generate at least a first electrical alert attention signal responsive to receiving the at least the first electrical receive signal;

a first alert device electrically coupled to the first receiver and adapted to generate at least a first alert responsive to receiving the at least the first electrical alert attention signal; and

a first waterproof receiver housing adapted to carry at least one of the first receiving element, the first receiver, and the first alert device, and

wherein the second receiver assembly further comprises:

5 a second receiving element adapted to generate at least a second electrical receive signal responsive to receiving the at least one wireless signal;

a second receiver electrically coupled to the second receiving element and adapted to generate at least a second electrical alert attention signal responsive to receiving the at least the second electrical receive signal,

10 a second alert device electrically coupled to the second receiver and adapted to generate at least a second alert responsive to receiving the at least the second electrical alert attention signal; and

a second waterproof receiver housing adapted to carry at least one of the second receiving element, the second receiver, and the second alert device.

15

382. (New) An underwater alert system comprising:

a transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting a wireless signal responsive to receiving dive computer data related to at least one of the first diver's body, equipment, and environment; and

5 a receiver assembly, adapted to be carried by a mask worn by a second diver while the second diver is underwater, for communicating to the second diver information related to the dive computer data responsive to receiving the wireless signal.

383. (New) The underwater alert system according to claim 382 further comprising:

10 an attachment mechanism adapted to permit the receiver assembly to be mechanically coupled to the mask.

384. (New) The underwater alert system according to claim 383, wherein the attachment mechanism further comprises:

15 a bracket adapted to be carried by the mask and having a first mounting interface adapted to mechanically engage and disengage a first mounting interface on the receiver assembly to permit the receiver assembly to be attached to and removed from, respectively, the bracket.

20 385. (New) The underwater alert system according to claim 384, wherein the bracket further comprises:

a second mounting interface having an adhesive disposed thereon to permit the second mounting interface of the bracket to be mechanically coupled to the mask.

25 386. (New) The underwater alert system according to claim 384, wherein the bracket is integrally formed with the mask.

387. (New) The underwater alert system according to claim 382, wherein the receiver assembly is integrally formed with the mask.

388. (New) An underwater alert system comprising:

a transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting a wireless signal responsive to receiving dive computer data related to at least one of the first diver's body, equipment, and environment; and

5 a receiver assembly, adapted to be carried by a second diver while the second diver is underwater, for communicating to the second diver information related to the dive computer data responsive to receiving the wireless signal, wherein the receiver assembly includes:

a tactile alert device adapted to generate a tactile alert, representing the information, which the second diver can feel.

10

389. (New) The underwater alert system according to claim 388, wherein the tactile alert device further comprises:

a vibrator adapted to generate a vibration signal representing the tactile alert.

15 390. (New) The underwater alert system according to claim 388,

wherein the transmitter assembly further comprises:

a dive computer adapted to generate the dive computer data responsive to receiving information related to at least one of the first diver's body, equipment, and environment;

20 a transmitter electrically coupled to the first dive computer and adapted to generate an electrical transmit signal responsive to receiving the dive computer data;

a transmitting element electrically coupled to the first transmitter and adapted to generate the wireless signal responsive to receiving the electrical transmit signal; and

a waterproof transmitter housing adapted to carry at least one of the dive computer, the transmitter, and the transmitting element; and

25 wherein the receiver assembly further comprises:

a receiving element adapted to generate an electrical receive signal responsive to receiving the wireless signal;

a receiver electrically coupled to the receiving element and adapted to generate an electrical alert attention signal responsive to receiving the electrical receive signal; and

30 a waterproof receiver housing adapted to carry at least one of the receiving element, the receiver, and the tactile alert device.

391. (New) An underwater alert system comprising:

a first transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting a first wireless signal responsive to receiving first dive computer data related to at least one of the first diver's body, equipment, and environment;

5 a first receiver assembly, adapted to be carried by a second diver while the second diver is underwater, for communicating to the second diver first information related to the first dive computer data responsive to receiving the first wireless signal;

a second transmitter assembly, adapted to be carried by the second diver while the second diver is underwater, for transmitting a second wireless signal responsive to receiving second dive computer data related to at least one of the second diver's body, equipment, and environment; and

10 a second receiver assembly, adapted to be carried by the first diver while the first diver is underwater, for communicating to the first diver second information related to the second dive computer data responsive to receiving the second wireless signal.

15 392. (New) The underwater alert system according to claim 391, wherein at least one of:

the first transmitter assembly and the second receiver assembly are integrally formed together to provide a first transceiver assembly adapted to be carried by the first diver, and

the second transmitter assembly and the first receiver assembly are integrally formed together to provide a second transceiver assembly adapted to be carried by the second diver.

20

393. (New) The underwater alert system according to claim 392, wherein at least one of:

the first transceiver assembly is integrally formed with a second mask adapted to be worn by the first diver, and

the second transceiver assembly is integrally formed with a first mask adapted to be worn by the second diver.

25

394. (New) The underwater alert system according to claim 391 further comprising at least one of:

a first attachment mechanism adapted to permit the first receiver assembly to be mechanically coupled to a first mask adapted to be worn by the second diver; and

30 a second attachment mechanism adapted to permit the second receiver assembly to be mechanically coupled to a second mask adapted to be worn by the first diver.

395. (New) The underwater alert system according to claim 394, wherein at least one of:  
the first attachment mechanism is integrally formed with the first mask, and  
the second attachment mechanism is integrally formed with the second mask.

5

396. (New) The underwater alert system according to claim 391, wherein at least one of:  
the first receiver assembly is integrally formed with a first mask adapted to be worn by the  
second diver, and

the second receiver assembly is integrally formed with a second mask adapted to be worn by  
10 the first diver.

397. (New) An underwater alert system comprising:

a transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting a wireless signal responsive to receiving dive computer data related to at least one of the first diver's body, equipment, and environment, wherein the transmitter assembly

5 further comprises:

a transmitter power supply adapted to provide electrical power for electrical elements of the transmitter assembly; and

a transmitter power switch adapted to electrically couple the transmitter power supply to electrical elements of the transmitter assembly responsive to the transmitter power switch being  
10 actuated; and

a receiver assembly, adapted to be carried by a second diver while the second diver is underwater, for communicating to the second diver information related to the dive computer data responsive to receiving the wireless signal, wherein the receiver assembly further comprises:

a receiver power supply adapted to provide electrical power for electrical elements of  
15 the receiver assembly; and

a receiver power switch adapted to electrically couple the receiver power supply to at least one of the electrical elements of the receiver assembly responsive to the receiver power switch being actuated,

wherein at least one of the transmitter power switch and the receiver power switch further  
20 comprises:

a water-activated switch adapted to be actuated responsive to the water-activated switch being located underwater.

25



398. (New) An underwater alert system comprising:

a transmitter assembly, adapted to be carried by a first diver while the first diver is underwater, for transmitting a wireless signal responsive to receiving dive computer data related to at least one of the first diver's body, equipment, and environment, wherein the transmitter assembly

5 further comprises:

a first identity selection device, including a first plurality of discrete hardware elements adapted to control software stored in memory in the transmitter assembly, adapted to program the transmitter assembly with at least at least one electronic identity responsive to predetermined selections of the first plurality of discrete hardware elements; and

10 a receiver assembly, adapted to be carried by one of the first diver and a second diver while one of the first diver and the second diver, respectively, is underwater, for communicating to one of the first diver and the second diver, respectively, information related to the dive computer data responsive to receiving the wireless signal, wherein the receiver assembly further comprises:

15 a second identity selection device, including a second plurality of discrete hardware receiver elements adapted to control software stored in memory in the receiver assembly, adapted to program the receiver assembly with the at least one electronic identity, responsive to predetermined selections of the second plurality of discrete hardware elements, to permit the receiver assembly to communicate with the transmitter assembly.

20 399. (New) The underwater alert system according to claim 398, wherein the at least one electronic identity further comprises at least one of:

a frequency channel, an address, and a code.

400. (New) The underwater alert system according to claim 398, wherein at least one of the first  
25 plurality of discrete hardware elements and the second plurality of discrete hardware elements further comprises:

three discrete hardware elements.

401. (New) An underwater alert system comprising:

a transmitter assembly, adapted to be carried by a diver while the diver is underwater, further comprising:

a first dive computer adapted to generate first dive computer data responsive to receiving first information related to at least one of the diver's body, equipment, and environment;

a transmitter electrically coupled to the first dive computer and adapted to generate at least one electrical transmit signal responsive to receiving the first dive computer data;

a transmitting element electrically coupled to the transmitter and adapted to generate at least one wireless signal responsive to receiving the at least one electrical transmit signal; and

a waterproof transmitter housing adapted to carry at least one of the first dive computer, the transmitter, and the transmitting element; and

a receiver assembly, adapted to be carried by the diver while the diver is underwater, further comprising:

a second dive computer adapted to generate second dive computer data responsive to receiving second information related to at least one of the diver's body, equipment, and environment;

a receiving element adapted to generate at least one electrical receive signal responsive to receiving the at least one wireless signal over a first wireless communication link, having a first range, between the transmitter assembly and the receiver assembly;

a receiver electrically coupled to the receiving element and adapted to generate at least one electrical alert attention signal responsive to receiving the at least one electrical receive signal;

a display device electrically coupled to the second dive computer and the receiver and adapted to display at least one of the first dive computer data and the second dive computer data responsive to receiving the at least one electrical alert attention signal and the second dive computer data, respectively; and

a waterproof receiver housing adapted to carry at least one of the second dive computer, the receiving element, the receiver, and the display device.

402. (New) An underwater alert system according to claim 401,

wherein the display device displays the first dive computer data responsive to receiving the at least the first electrical alert attention signal when the receiver assembly is in the first range of the transmitter assembly, which permits the receiver assembly to receive the at least one wireless signal,

5 representing the first dive computer data, and

wherein the display device displays the second dive computer data responsive to receiving the second dive computer data when the receiver assembly is out of the first range of the transmitter assembly, which prevents the receiver assembly from receiving the at least one wireless signal, representing the first dive computer data.

10

403. (New) The underwater alert system according to claim 402,

wherein the transmitter assembly is carried on an air supply tank carried by the diver, and

wherein the receiver assembly is carried by the diver's body or equipment worn by the diver.

15 404. (New) The underwater alert system according to claim 403 further comprising:

an attachment mechanism, adapted to mechanically couple the receiver assembly to the diver's body or equipment worn by the diver, further comprising at least one of:

a wristband, a strap, a cord, a band, a belt, a clip, and a clamp.

20 405. (New) The underwater alert system according to claim 404, wherein the receiver assembly is carried by the diver's wrist using the wristband.

406. (New) The underwater alert system according to claim 401, wherein at least one of the first dive computer data and the second dive computer data further comprises at least one of:

25 dive table time limits, dive time duration, dive depth, air supply level, direction, distance, water temperature, ascent rate, heart rate, and breathing rate.

407. (New) An underwater alert system comprising:

a receiver assembly, adapted to be carried by a first diver while the first diver is underwater, further comprising:

a second dive computer adapted to generate second dive computer data responsive to receiving second information related to at least one of the first diver's body, equipment, and environment;

a receiving element adapted to generate at least one electrical receive signal responsive to receiving from a transmitter assembly at least one wireless signal, representing first dive computer data;

a receiver electrically coupled to the receiving element and adapted to generate at least one electrical alert attention signal responsive to receiving the at least one electrical receive signal;

a display device electrically coupled to the second dive computer and the receiver and adapted to display at least one of first dive computer data and the second dive computer data responsive to receiving the at least one electrical alert attention signal and the second dive computer data, respectively; and

a waterproof receiver housing adapted to carry at least one of the second dive computer, the receiving element, the receiver, and the display device.

408. (New) The underwater alert system according to claim 407,

wherein the transmitter assembly is carried by the first diver, and

wherein the transmitter assembly transmits the at least one wireless signal, representing first dive computer data related to at least one of the first diver's body, equipment, and environment, to the receiver assembly over a first wireless communication link, having a first range, between the transmitter assembly and the receiver assembly.

409. (New) The underwater alert system according to claim 407,

wherein the transmitter assembly is carried by a second diver, and

wherein the transmitter assembly transmits the at least one wireless signal, representing first  
dive computer data related to at least one of the second diver's body, equipment, and environment,  
5 to the receiver assembly over a second wireless communication link, having a second range,  
between the transmitter assembly and the receiver assembly.

410. (New) The underwater alert system according to claim 407,

wherein the display device displays the first dive computer data responsive to receiving the at  
10 least the first electrical alert attention signal when the receiver assembly is in range of the transmitter  
assembly, which permits the receiver assembly to receive the at least one wireless signal,  
representing the first dive computer data, and

wherein the display device displays the second dive computer data responsive to receiving  
the second dive computer data when the receiver assembly is out of range of the transmitter  
15 assembly, which prevents the receiver assembly from receiving the at least one wireless signal,  
representing the first dive computer data.

411. (New) The underwater alert system according to claim 407,

wherein the transmitter assembly is carried on an air supply tank carried a diver, and

20 wherein the receiver assembly is carried by the diver's body or equipment worn by the first  
diver.

412. (New) The underwater alert system according to claim 407 further comprising:

an attachment mechanism, adapted to mechanically couple the receiver assembly to the first  
25 diver's body or equipment worn by the first diver, further comprising at least one of:

a wristband, a strap, a cord, a band, a belt, a clip, and a clamp.